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| 09/597,530      | 06/20/2000  | Anthony Sabatino     | 1461                | 5976             |

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EXAMINER

LY, NGHI H

| ART UNIT | PAPER NUMBER |
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2686

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DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/597,530

**Applicant(s)**

SABATINO, ANTHONY

**Examiner**

Nghi H. Ly

**Art Unit**

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7-9, 11-13, 15-20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbefin et al (US 6,269,243) in view of Powell (US 4,916,460).

Regarding claims 1, 7, 9, 15, 17 and 23, Corbefin teaches a system for providing wireless communication service to a passenger compartment of an aircraft (see fig.1, passengers inside the aircraft A), comprising in combination: an external antenna located on an exterior portion of the aircraft (see fig.1 external antenna 2 and see abstract for more details), a cabin antenna located in the passenger compartment of the aircraft (see fig.1, antenna 3 and see Abstract), and a signal pathway linking the external antenna to the cabin antenna (see fig.1, the connection between antennas 2 and 3).

Corbefin does not specifically disclose at least a portion of the signal pathway includes at least one low-energy transmission medium.

Powell teaches at least a portion of the signal pathway includes at least one low-energy transmission medium (see fig.1 fiber optic cable connection between antennas 16A and 40, and see column 1, lines 43-44, "a fiber optic network connected between the primary antennas and the secondary antennas").

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the above teaching of Powell into the system of Corbefin so that signals traveling within the fiber optic network are unaffected by radio frequency interference (see Powell column 3, lines 53-57) and the network could be established at a very significantly reduced cost (see Powell column 3 lines 38-41).

Regarding claims 2, 8 and 16, the combination of Corbefin and Powell further teaches the low-energy transmission medium comprises at least one optical fiber (see Powell fig.1 fiber optic cables 20 and 22).

Regarding claim 3, the combination of Corbefin and Powell further teaches the low-energy transmission medium is non-metallic (also see Powell fig.1, fiber optic cables 20 and 22).

Regarding claim 4, the combination of Corbefin and Powell teaches the at least one optical fiber has a first fiber end and a second fiber end (see Powell fig.2, optical interface system 25 and see column 2, lines 29-42), the signal pathway additionally comprises: first and second converters operable to convert RF signals to light energy and to convert light energy to RF signal, wherein the first converter is located at the first fiber end and the second converter is located at the second fiber end (see Powell fig.2, and see column 3 lines 18-37) and a repeater (see Corbefin fig.1, transponder 4).

Regarding claims 11 and 19, the combination Corbefin and Powell further teaches the step of converting the at least one low-energy outgoing signal (see Powell fig.1, fiber optic cables 20 and 22) and the step of transmitting the at least one outgoing external signal are performed at a location outside the passenger compartment (see Corbefin fig.2, ER1 is located outside the passenger compartment).

Regarding claims 12, 20 and 24, Corbefin further teaches a system for providing wireless communication service to a passenger compartment of an aircraft (see Corbefin fig.1 wireless communication between passengers P and antenna 3).

Regarding claim 13, the combination of Corbefin and Powell further teaches repeating the at least one incoming external including amplifying the at least one incoming external signal (see Powell fig.1 an amplifier under antenna 40 or see column 2, lines 61-63 "receiver amplifier unit 42").

Regarding claim 18, Corbefin further teaches repeating the at least one outgoing external signal (see fig.1, transponder 4 connected with external antenna 2 for repeating the outgoing external signal).

3. Claims 5, 6, 10, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbefin et al (US 6,269,243) in view of Powell (US 4,916,460) and further in view of Gilhousen (US 5,559,865).

Regarding claims 5 and 6, the combination of Corbefin and Powell teaches claim 4. The combination of Corbefin and Powell does not specifically disclose the repeater

Art Unit: 2686

includes an amplifier. Gilhousen further teaches the repeater includes an amplifier (see Gilhousen column 2, lines 48-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the above teaching of Gilhousen into the system of Corbfin and Powell in order to enhance the transmission signal and radio coverage.

Regarding claim 10, the combination of Powell, Corbfin and Gilhousen further teaches repeating the at least one incoming external signal (see Gilhousen fig.2, connection between repeater 210 and antenna 215 for repeating the incoming external signal).

Regarding claim 21, the combination of Powell, Corbfin and Gilhousen further teaches repeating the at least one outgoing external signal includes amplifying the at least one outgoing external signal (see Gilhousen column 2, lines 48-52).

4. Claims 14 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbfin et al (US 6,269,243) in view of Powell (US 4,916,460) and further in view of Mashida (JP408167786A).

Regarding claim 14, the combination of Corbfin and Powell teaches the steps of repeating and converting the at least one incoming external signal are performed in the aircraft (see Gilhousen column 2, lines 48-52 and see fig.2, connection between repeater 210 and antenna 215 for repeating the outgoing/incoming external signal). The combination of Powell, Corbfin and Powell does not specifically disclose the step

Art Unit: 2686

of repeating is performed in an electromagnetically isolated portion. Mashida teaches the step of repeating is performed in an electromagnetically isolated portion (see Mashida, Purpose).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the above teaching of Mashida into the system of Corbfin and Powell in order to protect the repeater from electromagnetic effect (see Mashida's Purpose).

### ***Response to Arguments***

5. Applicant's arguments filed 10/20/2003 have been fully considered but they are not persuasive.

On page 2 of Applicant's remarks, Applicant argues that on of ordinary skill would not be motivated to combine Corbfin with Powell

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation to do so found in the references themselves so that signals traveling within the fiber optic network are unaffected by radio frequency interference (see Powell column 3 lines 53-

57) and the network could be established at a very significantly reduced cost (see Powell column 3 lines 38-41).

On pages 2 and 3 of Applicant's remarks, Applicant argues that Corbefin is silent on how to reduce potential interference such as noise from occurring.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Powell teaches reducing potential interference such as noise from occurring (see Powell column 3, lines 53-57, "*signals traveling within the fiber optic network are unaffected by radio frequency interference*"), and the combination of Corbefin and Powell indeed teaches Applicant's claimed invention. In addition, Applicant's attention is directed to the rejection of claims 1, 7, 9, 15, 17 and 23 above.

On page 3 of Applicant's remarks, Applicant further argues that Gilhousen or Mashida fails to overcome the deficiency of the combination of Corbefin and Powell.

The Examiner, however, disagrees. Gilhousen or Mashida in deed teaches Applicant's claimed limitation. In addition, Applicant's attention is directed to the rejection of claims 5, 6, 10, 18, 21, 14 and 22 above.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



Art Unit: 2686

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Nghi H. Ly



February 10, 2004

*Marsha D Banks-Harold*

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